

Please replace the paragraph beginning line 6 of page 1 with the following rewritten paragraph:

a2 The invention relates to a method of updating subscriber-related data in a network.

Page 1, between lines 8 and 9, please insert the following heading:

BACKGROUND OF THE INVENTION

Please replace the paragraph beginning line 20 of page 3 with the following rewritten paragraph:

This results in the following technical problem:

How can the database (which is loaded in an announcement, fax retrieval or dialog device in a switching center for the purpose of trial activation) for an individual network customer be made available in the same switching center and throughout the network to all the announcement, fax retrieval and dialog devices associated with this customer, without the customer explicitly needing to address the devices involved and having to carry out and monitor sequential transmission of the updated database at the customer end? A further problem that arises in this case is that fault situations in the network (for example failure of a switching center or of a device that is involved) or changes to the network topology (for example extensions to the announcement capacity in the switching centers) can affect the operator interface of the announcement, fax retrieval and dialog customer, and may thus necessitate specific action. A further problem is that time restrictions (for example changes relating only to specific times of the day) or dependencies on the network operator (for example the use of maintenance personnel) exist and, finally, there is a risk of data being lost.

Page 4, between lines 25 and 26, please insert the following headings and paragraphs:

SUMMARY OF THE INVENTION

In one embodiment of the invention, there is a method for updating subscriber-related data records, which are stored locally in a number of service devices in a switching network. The method includes, for example, providing administrative measures for each data record which is stored in one of the service devices, to store a list of the addresses of the other service devices which store the data record and addressing each data record in a standard manner throughout the network, wherein a change to the data record is carried out on one of the service devices which

stores the corresponding data record, and the service device reports the change throughout the network to the other service devices.

In another aspect of the invention, the service devices are included in the peripherals of a communications system.

In another aspect of the invention, the service devices are included in the network nodes of a switching network.

In yet another aspect of the invention, the lists are updated in the course of administration of the switching network or of the communications system.

In another aspect of the invention, an old data record is stored until the initiation of the network-wide or switching-center-wide updating by the customer.

In another aspect of the invention, the data record is updated by the service devices which initially have a new data record during a background process for successive updating of the other service devices.

In still another aspect of the invention, repeated cyclic updating attempts are performed in the background process if the service devices to be updated are inaccessible or the attempts are unsuccessful.

In another aspect of the invention, the method includes utilizing connections which have been made temporarily between the service devices in order to update the data records.

In another aspect of the invention, an update-specific communication occurs between the service devices via a switching-center-internal message distribution system or, throughout the network, via ISDN user-to-user signaling, or switching-center internally and throughout the network via the Internet Protocol.

In yet another aspect of the invention, a number of data records are updated via one updating connection.

In another aspect of the invention, the updating format is defined in the course of the communication between the service devices.

In another aspect of the invention, the time required for updating is reduced by multiple channel connection and/or multiple starting of the background process.

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In still another aspect of the invention, the method includes updating a time stamp to the update to prevent the current data record from being overwritten by older data records when a number of updating background processes are carried out at the same time.

In another aspect of the invention, activation of the background processes of service devices which are still in operation is carried out to update service devices which are being taken back into operation again after repair.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be explained in more detail in the following text with reference to an exemplary embodiment, which is illustrated in the figures, in which:

Figure 1 shows the typical architecture of a communications system.

Figure 2 shows an architecture of a service device which is integrated in a switching center.

Figure 3 shows the connection processes and internal communication between integrated service devices.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

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Please replace the paragraph beginning line 26 of page 4 with the following rewritten paragraph:

In one embodiment of the invention, information can be updated from the customer end easily, reliably, at the right time and in a user-friendly manner.

[Please delete the paragraph beginning at line 31 of page 4 in its entirety.]

Please replace the paragraph beginning line 35 of page 4 with the following rewritten paragraph:

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One advantage of the invention is that administrative measures are taken to ensure that, for each data record which is stored in one of the service devices, a list is kept of the addresses of the other service devices which likewise keep the data record, that each data record can be addressed in a standard manner throughout the network, and that a change, initiated by the customer, to the data record is carried out on one of the service devices which keep that data

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record, and the service device reports this change throughout the network to the other service devices. This is associated with the advantage that changes to the announcement, fax and dialog functions can be carried out not only by the network operator but also, in particular, by the customer himself.

Please delete the paragraph beginning at line 14 of page 5 in its entirety.

Please delete the paragraph beginning at line 17 and ending at line 30 on page 5 in its entirety.

Please replace the paragraph beginning line 4 of page 6 with the following rewritten paragraph:

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The peripheral devices $LTG_1 \dots LTG_n$ carry out switching tasks associated with the speech channels of the peripheral device. They include switching, operating and administrative programs as well as the data information associated with the device, such as the access situation, signaling, authorizations, telephone numbers, individual characteristics of connecting lines and subscriber connections, as well as the extent state and configuration of the peripheral device. Devices IP which have the function of service devices are integrated as part of an integrated solution in one of the peripheral devices LTG_{IP} .

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Please replace the paragraph beginning line 1 of page 7 with the following rewritten paragraph:

In figure 2, the process of setting up a connection V_1 to an integrated announcement device OCANEQ via an analog connecting line or an ISDN connecting line is controlled by a subscriber (direct recording). The process of setting up connections can likewise be controlled separately via a PC. Once the speaking of the announcement text to the integrated announcement device OCANEQ has been completed, the latter sets up a further connection V_2 to a further integrated announcement device OCANEQ in a further peripheral device LTG (single update). The integrated announcement device OCANEQ arranged there is updated using the announcement text. If the original integrated announcement device OCANEQ has failed, a further connection V_3 can be set up to once again store the transmitted announcement text back in the original integrated announcement device OCANEQ on startup (mass update after repair).

Please replace the paragraph beginning line 26 of page 7 with the following rewritten paragraph:

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The invention provides for the announcement, fax retrieval and dialog capacities of the telecommunications network to be administered. In particular in this case, an association is made between the specific capacity and the customer using this capacity. The peripheral devices LTG_{IP} which provide the corresponding customer announcements, fax retrieval data or speech recognition data in the communications systems or external intelligent peripherals IP are informed, in the course of administration of these network functions, of the list (which is associated with the respective data record to be stored) of all the other integrated or external intelligent peripherals IP in the network which keep this data record available. In this case, the data record is identified by a standard network index (for example the fragment number of the announcement fragment). Furthermore, the list of the further internal or external intelligent peripherals IP includes the network-standard addresses of the IPs themselves. In general, this may be a list of telephone numbers which are applicable throughout the network, and in the case of integrated IPs, it may also include the connection situations of the integrated IPs applicable within the switching center.

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Please replace the consecutive paragraphs beginning at line 36 of page 9 with the following rewritten paragraphs:

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Once the updating has been carried out, connections such as these are cleared down once again. If it has been possible to set up a connection, then the actual updating, that is to say the transmission of the amended data record in the further IP, requires communication between the IPs that are involved. For example, the IP that is being addressed should preferably know the index of the data record to be updated. The nature of the update may also need to be signaled (for example, in the case of announcements, the playing of the start and end tone, or protocol-protected transmission via PPP). It is also preferable to transmit the readiness of the addressed IP for updating, as well as success acknowledgement, failure acknowledgement and repetition request, between the two IPs. Network-wide user-to-user messages and/or reports carried within the switching center via the message distribution system may also be used for such information interchange between the relevant IPs. If it is not possible to contact an IP to be updated, as can occur, for example, due to hardware failures, then the background process mentioned above will start updating attempts once again, cyclically. An updating connection which has been switched to another IP can be used to update a number of data records. This connection is expediently